

Supplementary Submission to Legco Panel on the Environment

Integrated Waste Management Action Group : Implementing “Plan B”

1. Introduction

1.1 At the conclusion of the Fourth Session of the Public Hearing on Saturday 22 March 2014 the Chair invited further submissions from the public groups present. In particular it was noted that there was a similarity in themes between those submitting, and it was suggested that these could be brought together in a more systematic manner.

1.2 This Supplementary Submission draws on the submission made by IWMAAG for “Plan B” and the consistent themes from the Dutch Chamber of Commerce, the Swedish Chamber of Commerce and other submissions which related to the need for urgency, the need for a long term solution not reliant on landfill, the use of modern technology for Waste to Energy (WTE) plants and a phased implementation of any extensions to the landfills.

2. Fundamental Objectives

2.1 Arising from the discussion at the Panel Hearing, the fundamental objectives are :-

- The amount of MSW going to landfills or WTE plants needs to be minimized by reducing total waste production, increasing sorting at source, introducing high capacity mechanical sorting, and increasing industrial and community recycling capacity;
- Education and the introduction of measures such as charging to change community attitudes is necessary, but will not reduce MSW significantly in the time required, which is by 2017;
- Better use of the landfill sites must be made by using them as sites for proper integrated waste management facilities, rather than just as sites for dumping waste.
- Sorting plants, composting plants, recycling plants and WTE plants should be included on the landfill sites where appropriate, and of a scale to deal with the waste generated by the region;
- A flexible action plan focusing on early implementation, without the need for land reclamation, needs to be provided in the context of the Administrations proposed Strategic Review;
- In the context of alternative measures also being implemented to meet the main objectives, minimal phased expansion of existing landfills is likely to be required

to accommodate MSW up to 2019. The long term objective remains to remove the need for landfills.

2.2 IWMAG and other presenters at the Panel hearing have a genuine desire to see a sustainable waste management system urgently put into place. The proposals by many see some form of WTE treatment acceptable on a small scale, as a last resort, in the right locations, and provided it is part of a fully integrated waste management plan. Given the urgency sites that require reclamation should be excluded. This plan must look beyond the current “Phase 1” and be able to include the unknowns of Governments “Phase 2”.

3. The “3 + 1” Proposal must be Withdrawn

3.1 The objectives outlined above cannot be achieved by the Administration’s current “3 + 1” proposal and it should not be endorsed by the Panel. Also, as many pointed out, this proposal is the same as was previously rejected by the Legislative Council and there has been no change introduced which would make it more acceptable. By bundling it all together in one submission makes it difficult to approve any individual component.

3.2 It is therefore strongly recommended that the Panel direct the Administration to withdraw the current proposal and to come back with individual proposals which better meet the objectives outlined above and proposed by the public.

4. A Proposal for Taking it Forward

4.1 In order to assist the Administration in coming forward with a practical and acceptable proposal within a short time frame, it is suggested that the Panel should require the following of the Administration:-

(a) Any funding request for the Shek Kwu Chau, or indeed any large scale incinerator, would not be considered until the Strategic Review is undertaken and presented to Legco. The Strategic Review should be based on community engagement and should not be constrained by the decisions of previous administrations.

(b) Phased expansion plans for each of the existing landfills to accommodate needs initially up to 2019, should be prepared. A proposal for each site must include the following:-

(i) NENT – a proposal for a small expansion of the landfill should be accompanied by a proposal for a waste sorting plant on site to handle not less than 1,400tpd with associated composting plants, recycling plants

and storage areas. A WTE plant of capacity of around 600tpd should be considered for this site.

- (ii) SENT – a small expansion of the landfill should only be considered if a waste sorting plant to handle not less than 700tpd be located nearby in Area 137, which has town planning zoning for this purpose. It is further from Tseung Kwan O than the landfill, and has sea access. This plant would basically accommodate MSW generated in Sai Kung District only.
 - (iii) WENT – a small expansion of the landfill should only be considered if a waste sorting plant of not less than 1,400tpd capacity is provided along with associated composting plants, recycling plants and storage areas. A WTE plant of around 600tpd capacity should be provided. either in the landfill site or in the Tsang Tsui lagoon site previously identified as suitable for and incinerator. Town planning approval is not required.
 - (iv) North Lantau – a possible further integrated waste treatment facility be considered on existing reclamation and in an adjacent cavern, to process waste generated from Lantau and urban areas. This should have a capacity of at least 700tpd and include sorting, composting and recycling facilities.
- (c) These facilities should be planned for implementation between 2017 and 2019 along with limited landfill expansion. Additional facilities should be examined for consideration as a later phase, dependent on the general levels of waste production around 2020 and the effectiveness of these measures. No further expansion of landfills should be intended. No waste should be dumped in landfills without first being mechanically sorted.
- 4.2 This process needs to be fast tracked. The Administration should be encouraged to go to the industry for expressions of interest for the waste sorting and recycling plant as early as possible, rather than relying on consultant studies. While IWMAAG has provided a rough estimate of 5 waste sorting lines costing between \$2-\$4 billion, the actual costs would depend on the specifications and these costs can best be provided by the industry.
- 4.3 The provision of smaller WTE plants than that proposed for SKC will provide flexibility depending on the achieved recycling rates, and enable consideration of modern technology for both gasification and incineration, rather than one large commitment to one form of technology. Any WTE plant should be required to meet stringent environmental and performance standards.

5. Strategic Review Should be Completed Before Funding Sought for Shek Kwu Chau

5.1 The inadequacies with the current proposals appear to be now recognised by the Administration. In paragraph 9(l) of the Paper it is mentioned that:-

“we will embark on preparatory work this year for a strategic study on future waste management facilities. The study will look into various issues such as types, scale, technology, locality and timing of new strategic and regional facilities and services with a view to drawing up a strategic masterplan of waste management facilities for the future.”

5.2 IWMAG’s analysis has shown that such a masterplan is necessary and their “PLAN B” is actually a flexible high level “strategic masterplan” which needs to now be worked up in more detail. In view of this need now being recognised by the Bureau, **it would be fundamentally wrong to give support to over HKD18 billion of taxpayers money for the SKC incinerator before the masterplan has been completed.** However, the investment in high capacity waste sorting plants, composting plants and recycling plants should proceed immediately, as they will form an essential part in waste reduction irrespective of the form of WTE plant finally adopted.

5.3 Most parties accept that a holistic approach should be adopted in addressing Hong Kong’s waste disposal needs. While the 2013 Government Blueprint has commenced this process it does not include any high capacity waste sorting or recycling facilities which are part of a holistic approach. Innovation is taking place rapidly in the waste industry and Hong Kong should have a Strategic Plan which is able to capitalise on this.¹

6. Conclusion

6.1 The invitation from the Panel to make a supplementary submission is welcomed by IWMAG. It is hoped that the proposals outlined above encapsulate the basics of the submissions made by others as well. They are deliberately high level proposals and should be read in conjunction with the “Plan B” proposed in IWMAG’s main submission. “Plan B” is summarised in the Figures presented in the previous submission and attached to this submission for members convenience.

6.2 It would seem that some limited phased expansion of the existing landfill sites is necessary. However, any expansion which may be approved should be subject to the condition that these sites be used for integrated waste management facilities as outlined above. Furthermore, no large scale expansion of the landfill sites should be permitted as other measures must be made to work so that landfills cease to be part of Hong Kong’s waste management solution..

¹ “Innovations in Waste Management” by Claudine Capel. Waste Management World Volume 11 Issue 2. www.waste-management-world.com

Integrated Waste Management Action Group
March 2014

Notes:

1. For more information about IW MAG see www.wastehk.org
2. An example of mechanical waste sorting can be seen at <http://www.youtube.com/watch?v=YxevVBAeN4s>; other videos of these machines in action can be found at <http://www.youtube.com/watch?v=wugmX85ipRU>
3. An example of a plasma gasification plant located at Teesside, United Kingdom, with a capacity of around 900tpd can be seen at <http://www.westinghouse-plasma.com/projects/> and pages 4-5 at http://www.westinghouse-plasma.com/wp-content/uploads/2013/01/NRG-Focus_Dec_2012_EMAIL.pdf
4. An example of a waste-to-energy incinerator located at Roosendaal, Netherlands, with a capacity of around 800tpd can be seen at http://www.hz-inova.com/cms/images/stories/pictures/download/hzi_ref_roosendaal_en.pdf

Current Situation

- SKC does not have funding or approval, therefore no confirmed date for implementation
- The planned range of facilities are inadequate to handle all MSW in Hong Kong
- Landfill extensions not yet approved and soon full – SENT to be closed to MSW soon.
- The government plans for 6 OUTFs in total – but only 2 (or 3) sites confirmed
- The SKC incinerator can only handle 3,000 tpd, some 3,200 tpd will be landfilled

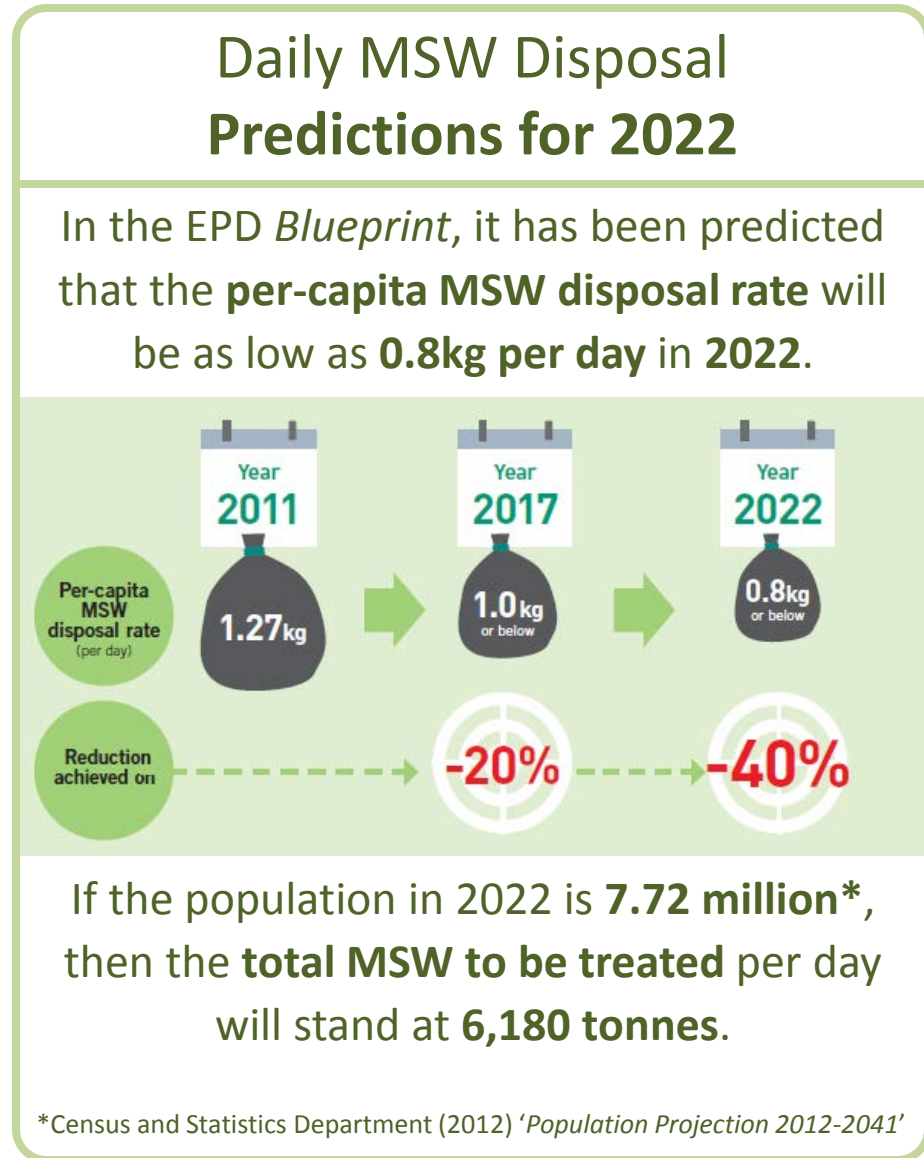


Figure 1

Integrated Waste Management Action Group (IWMAG)

Alternative Proposal – Plan B

The IWMAG Proposal is a **different approach** which:

- involves the broader community
- is more environmentally sensitive
- can be implemented in a shorter timescale (in part)
- is likely to be more economically viable
- is more flexible to cater for technology advances
- distributes the responsibility regionally

An Improved Alternative.

It **prioritises and emphasises** on:

- Waste reduction
- Mechanical sorting
- Recycling
- Composting

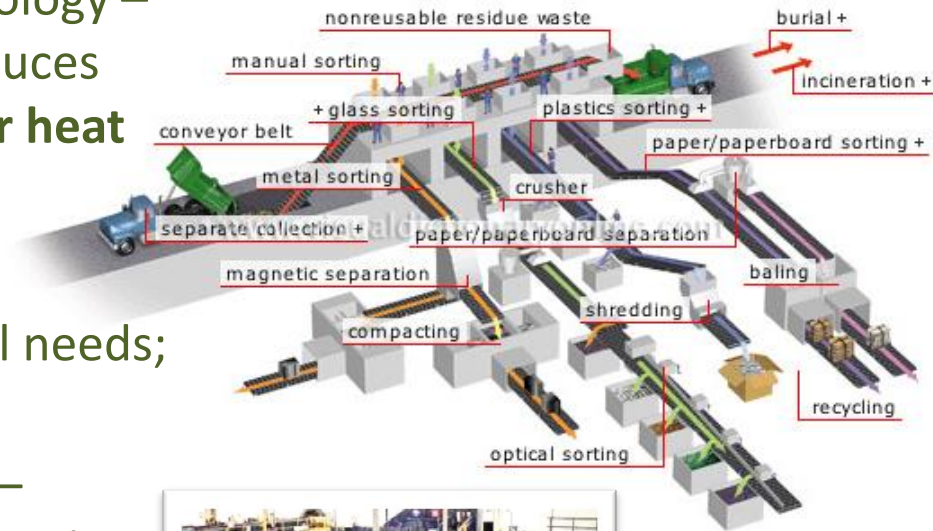
And heat treatment and/or landfilling *only as the last resort.*

***Separate, Recycle,
Don't Incinerate!***

A true multi-purpose IWMF

Separate, Recycle, Don't Incinerate!

- Utilise proven **mechanical sorting** technology – ALL MSW to be mechanically sorted; reduces amount by up to 80% – **reduces need for heat treatment or landfilling**
- **On-site recycling plant and composting**
- **Regionally distributed** – respond to local needs; more balanced approach
- Make best use of **readily available sites** – located in areas with compatible neighbouring activities; marine access; better use of NENT and WENT landfill sites
- **Supported by local recycling centres** – fed by territory-wide waste collection and separation network
- Use best technology which meets performance criteria – **technologically neutral**



IWMAG Plan B

Separate, Recycle, Don't Incinerate!

IWMAG proposes 4 suitable, alternative sites for IWMFs: no reclamation required
Distribution of facilities capable of handling 6,180tpd of MSW anticipated in 2022.

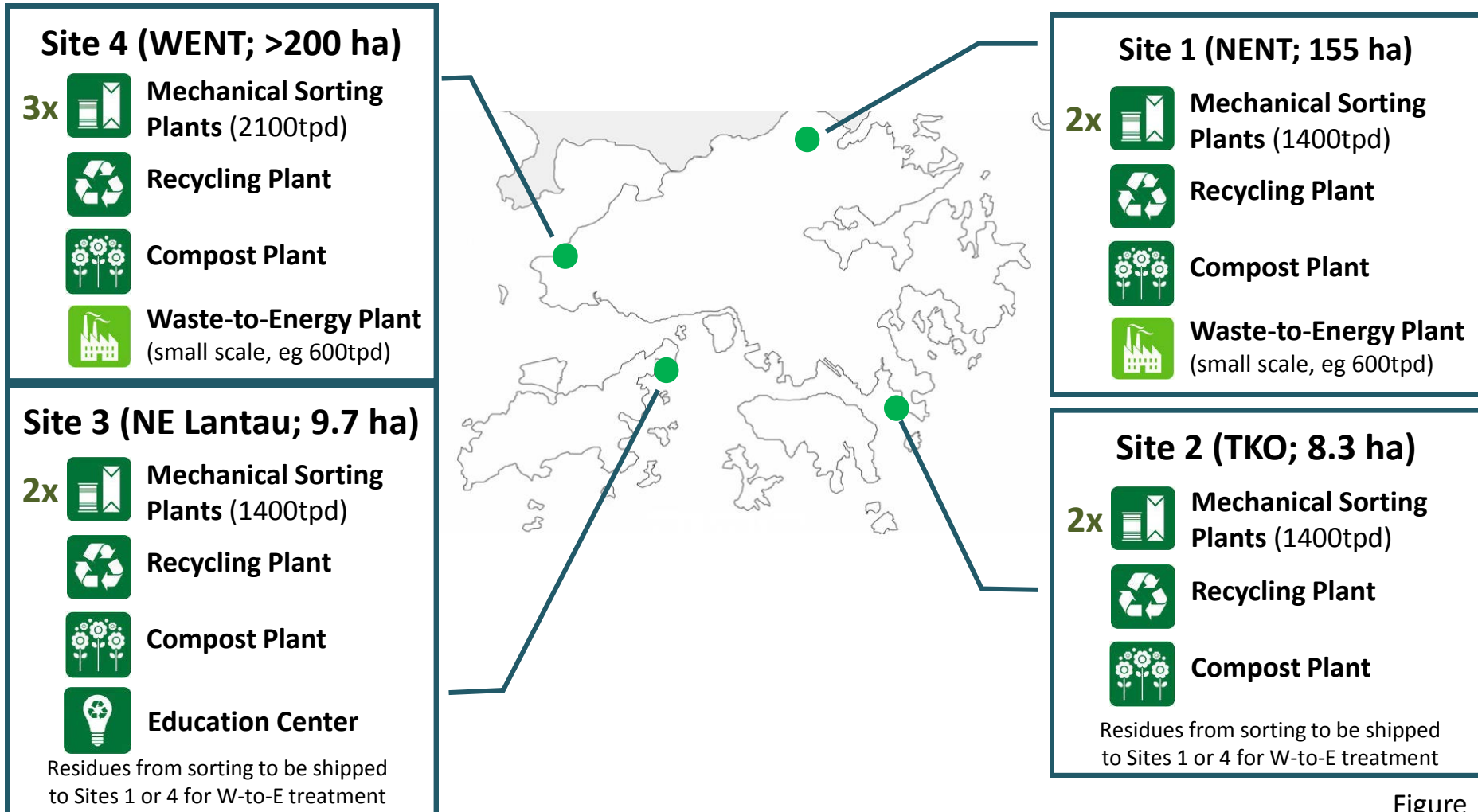


Figure 4